**Reviewer’s report**

**Title:** Prevalence of and Factors associated with Sarcopenia among Multi-Ethnic Ambulatory Older Asians with Type 2 Diabetes Mellitus in a primary care setting

**Version:** 0 **Date:** 06 Jan 2019

**Reviewer:** Ellen Freiberger

**Reviewer's report:**

The authors investigated with a cross-sectional design first the prevalence of sarcopenia in Type 2 diabetes Asian population, and second the identification of mediating factors for sarcopenia. Although this topic is of interest as sarcopenia is a relative new research field and many interactions are not well understand there are major comments to be addressed before the manuscript can be considered for publication.

**Major comments:**

**Key words:**

1. Please change "elderly" to aging as elderly is no longer appropriate. Furthermore, the reviewer would suggest highlighting more the first objective "prevalence", and seconding "risk factors". For the reviewer it is not clear why chronic kidney disease would be a key word.

**Background:**

2. Please provide information if the AWGS also include the different stages of sarcopenia. For the future reader it may be confusing switching between the different definitions. Please provide a rational to look at the different stages of sarcopenia. The reviewer fully understands, that to look at the different stages is important, but would like to see a rational behind it (p 4 line 10-14).

**Method**

3. Please provide information why the authors choose the ambulatory primary care setting (is this a GP setting or special care settings for T2DM. The reviewer is coming out of health care system in which T2 DM would have a special care system so please specify.
4. Please provide information why there is a cut-off on age (89 years) as especially higher age is prevalent in older population (above 85 y).

5. The sample size estimation is very well explained (p 6 line 68-76).

6. Please provide information about the possible period for the "latest Hb1C" values (p 8 line 110-111) as the authors mention earlier that the participants would come only one-two times into the clinic. Therefore, the reviewer wonders if this value could be a year old.

Result:

7. The reviewer would like to suggest analyzing the data by creating two age groups. From table 1 it is clear that the prevalence of sarcopenia is increasing, and it may be that there are other factors are more important in the different age groups e.g. hospitalization.

8. Please also provide some information about the medical condition in Table 1.

9. Please review if sitting is associated with lower risk of sarcopenia, which is in contrast to the presented data (p 10 line 155-156).

10. Please provide information about the time period of the existing T2 DM diagnosis in all participants as this will have an impact on the association (in Table 1 as well as in the result section). This is an important missing information. Also, information on the therapeutic intervention should be given. The T2 DM participants are actually -at least in our medical systems- by medications having a "normal" HbA1C. For the reviewer it is not clear if the participants were on medication for T2DM or newly diagnosed. Please clarify.

Discussion

11. For the reviewer it is not clear if the participants in this study are sampled, and weighted to represent the general older population in Singapore. To the understanding of the reviewer, this study population was recruited in one Center. Please comment.

12. For the future reader it is not clear that the variable "number of policlinic visits" (Table 2 p.18) is higher numbers of visits as explained on p 12 line 220-225. Could another explanation be that the medical doctor closely supervised their T2DM. For the reviewer -again- it is not clear how the "normal" T2DM procedure is in Singapore. In the culture of the reviewer, older persons with severe T2DM would have to see their medical doctor on
a regular basis. Therefore, more visits would be related to the severity to the T2DM disease, and not necessarily to health behavior aspects.

Minor comments:

13. Please change throughout the manuscript the term "elderly" (e.g. p 4 line 3) as this term is international not recommended having in many western cultures a negative touch. Please also change the wording "subjects" to "participants" for the same reason.

14. Please provide references for the sentence p4 line 23 as the authors mention "studies" but provide later on only one reference.

15. Please provide for reference 5 Lee et al. the doi or internet link.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Unable to assess

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable
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